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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,746	09/30/2003	Harold N. Rosenstock	IS01415MCG	7946

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EXAMINER

LAZARO, DAVID R

ART UNIT	PAPER NUMBER
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2155

MAIL DATE	DELIVERY MODE
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09/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/676,746

Applicant(s)

ROSENSTOCK ET AL.

Examiner

David Lazaro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/30/2003.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

1. Claims 1-29 are pending in this office action.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 09/30/2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

3. The drawings filed 09/30/2003 are accepted by the examiner.

Specification

4. The disclosure is objected to because of the following informalities: Please provide the relevant application and U.S. Patent numbers for the related cases listed on page 1 of the specification.
5. The use of the trademark Infiniband has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.
6. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.
7. Appropriate correction is required.

Claim Objections

8. Claim 13 is objected to because of the following informalities: Claim 13 contains the language "computed computing" which is grammatically unclear. Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1, 5, 6, 11-20, 24 and 25 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claims contains the trademark/trade name Infiniband. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph: See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe an "architecture

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subnet" in claims 1, 5, 6, 11, 14, 15, 20, 24 and 25, and an "architecture node" in claims 11-19. Accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

13. Claims 1-6, 11-15 and 20-25 are rejected under 35 U.S.C. 102(a) as being anticipated by "InfiniBand™ Management Interoperability" by Gregory Pfister, published January 7, 2003 (hereinafter Pfister).

14. With respect to claims 1 and 20, Pfister teaches a method (and corresponding computer readable medium), comprising:

providing an InfiniBand architecture subnet having a plurality of subnet managers (Pages 8: first 2 paragraphs - "master and standby" and "provision for multiple standby systems");

one of the plurality of subnet managers assuming a master subnet manager function (Page 8: first paragraph - master); and

computing derived database elements independent of which of the plurality of subnet managers assumes the master subnet manager function (Page 8: first 2 paragraphs: each manager maintains copies of the operational data which can be used for failover).

15. With respect to claims 2 and 21, Pfister further teaches wherein computing comprises the master subnet manager function computing the derived database elements (Page 8: first 2 paragraphs: Master maintains a copy of the data).

16. With respect to claims 3 and 22, Pfister further teaches wherein the derived database elements computed are identical regardless of which of the plurality of subnet managers assumes the master subnet manager function (Page 8: first 2 paragraphs - as each manager maintains a copy of the data, each manager can assume master operations using their copy of the data).

17. With respect to claims 4 and 23, Pfister further teaches wherein computing comprises computing the derived database elements deterministically regardless of which of the plurality of subnet managers assumes the master subnet manager function (Page 8: first 2 paragraphs - copies are synchronized through "two-phase commit protocol" for example).

18. With respect to claims 5 and 24, Pfister further teaches the master subnet manager function initializing the InfiniBand architecture subnet utilizing the derived database elements (Pages 7 first paragraph and Page 8 first 2 paragraphs: managers contain the data for their subnet, standby assumes master operations with its copy of data).

19. With respect to claims 6 and 25, Pfister further teaches creating a replicated set of database elements at a standby subnet manager (Page 8 first paragraph: each manager maintains a replicated database); the standby subnet manager assuming the master subnet manager function (Page 8 second paragraph: standby assumes master

operations); the master subnet manager function computing the derived database elements (Page 8 second paragraph: standby assumes master operations using its copy of the replicated data); and the master subnet manager using the replicated set of the database elements and the derived database elements to initialize the InfiniBand architecture subnet (Page 8 second paragraph: standby assumes master operations using its copy of the replicated data).

20. With respect to claim 11, Pfister teaches an InfiniBand architecture node, comprising:

one of a plurality of subnet managers in an InfiniBand architecture subnet (Pages 8: first 2 paragraphs - "master and standby" and "provision for multiple standby systems");

a master subnet manager function (Page 8: first paragraph - master), wherein the master subnet manager function is assumed by the one of the plurality of subnet managers (Page 8: first 2 paragraphs: each standby manager can assume master operations); and

derived database elements, wherein the derived database elements are computed by the master subnet manager function, and wherein the derived database elements are computed independently of which of the plurality of subnet managers in the InfiniBand architecture subnet assumes the master subnet manager function (Page 8: first 2 paragraphs: each manager maintains copies of the operational data which can be used for failover).

21. With respect to claim 12, Pfister further teaches wherein the derived database elements computed are identical regardless of which of the plurality of subnet managers assumes the master subnet manager function (Page 8: first 2 paragraphs - as each manager maintains a copy of the data, each manager can assume master operations using their copy of the data).

22. With respect to claim 13, Pfister further teaches wherein the derived database elements are computed computing deterministically regardless of which of the plurality of subnet managers assumes the master subnet manager function (Page 8: first 2 paragraphs - copies are synchronized through "two-phase commit protocol" for example).

23. With respect to claims 14, Pfister further teaches the master subnet manager function initializing the InfiniBand architecture subnet utilizing the derived database elements (Pages 7 first paragraph and Page 8 first 2 paragraphs: managers contain the data for their subnet, standby assumes master operations with its copy of data).

24. With respect to claims 15, Pfister further teaches a replicated set of database elements, wherein the replicated set of database elements are created at the InfiniBand architecture node (Page 8 first paragraph: each manager maintains a replicated database); and wherein the master subnet manager uses the replicated set of the database elements and the derived database elements to initialize the InfiniBand architecture subnet (Page 8 second paragraph: standby assumes master operations using its copy of the replicated data).

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claims 7-10, 16-19 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfister in view of "IP over InfiniBand (IPoIB) Architecture" an Internet Draft, December 15, 2001, by Vivek Kashyap (hereinafter Kashyap).

27. With respect to claims 7, 16 and 26, Pfister teaches all the limitations of claims 1, 11 and 20 respectively, but does not explicitly disclose the derived database elements comprises a local identifier assignment.

Kashyap teaches that data managed and used for operations by a subnet manager in an Infiniband architecture can include a local identifier assignment (Page 4, local ID - LID).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Pfister as indicated by Kashyap such that the derived database elements comprises a local identifier assignment. One would be motivated to have this, as it is desirable to maintain high availability, which would include the data managed and operated upon by subnet managers, such as the local identifier assignment (In Pfister: Page 7 first 3 paragraphs).

28. With respect to claims 8, 17 and 27, Pfister teaches all the limitations of claims 1, 11 and 20 respectively, but does not explicitly disclose the derived database elements comprises a tree determination.

Kashyap teaches that data managed and used for operations by a subnet manager in an Infiniband architecture can include a tree determination (Page 11, multicast tree).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Pfister as indicated by Kashyap such that the derived database elements comprises a tree determination. One would be motivated to have this, as it is desirable to maintain high availability, which would include the data managed and operated upon by subnet managers, such as a tree determination (In Pfister: Page 7 first 3 paragraphs).

29. With respect to claims 9, 18 and 28, Pfister teaches all the limitations of claims 1, 11 and 20 respectively, but does not explicitly disclose the derived database elements comprises a forwarding table assignment.

Kashyap teaches that data managed and used for operations by a subnet manager in an Infiniband architecture can include a forwarding table assignment (Page 5: switch/channel adapter tables determine packet forwarding).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Pfister as indicated by Kashyap such that the derived database elements comprises a forwarding table assignment. One would be motivated to have this, as it is desirable to maintain high availability, which would include the data

managed and operated upon by subnet managers, such as a forwarding table assignment (In Pfister: Page 7 first 3 paragraphs).

30. With respect to claims 10, 19 and 29, Pfister further teaches wherein the forwarding table assignment can comprise at least one of a linear forwarding table assignment and a multicast forwarding table (In Kashyap: Pages 5-6: switch/channel adapter tables determine linear packet forwarding and can additionally support multicasting),

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

32. U.S. Patent Application Publication 2002/0188711 by Meyer et al. December 12, 2002. Disclose failover system for primary and backup members. Includes replicated database and support for Infiniband network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is 571-272-3986. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David Lazaro
August 31, 2007